

WHAT IS CLAIMED IS:

1 1. A method of transmitting video information comprising:
2 (a) obtaining a first video frame containing image data;
3 (b) obtaining structural information inherent in said image data;
4 (c) obtaining a second video frame to be encoded relative to said first
5 video frame;
6 (d) computing kinetic information for describing said second video frame
7 in terms of said structural information of said first video frame; and
8 (e) transmitting said kinetic information to a decoder for use in
9 reconstructing said second video frame based on said decoder's generation of said
10 structural information of said first video frame.

1 2. A method of transmitting video information comprising:
2 (a) obtaining a first video frame containing image data;
3 (b) obtaining structural information inherent in said image data.
4 (c) obtaining a second video frame to be encoded relative to said first
5 video frame;
6 (d) encoding second video frame using adaptive coding dependent on said
7 structural information; and
8 (e) transmitting the encoded second video frame to a decoder.

1 3. A method of receiving video information comprising:
2 (a) receiving an encoded first video frame;
3 (b) reconstructing the first video frame from said encoded first video
4 frame;
5 (c) obtaining structural information inherent in said image data;
6 (d) receiving kinetic information describing a second video frame in terms
7 of said structural information of said first video frame; and
8 (e) reconstructing said second video frame.

1 4. A video codec comprising an encoder and a decoder, said encoder
2 configured to:
3 obtain a first video frame containing image data;
4 segment said first video frame to obtain structural information inherent in
5 said image data;

6 obtain a second video frame to be encoded relative to said first video
7 frame;
8 compute kinetic information for describing said second video frame in
9 terms of said structural information of said first video frame; and
10 transmit said kinetic information to a decoder for use in reconstructing said
11 second video frame based on said decoder's generation of said structural information of
12 said first video frame; and
13 said decoder configured to:
14 receive said encoded first video frame;
15 reconstruct said first video frame from said encoded first video frame;
16 segment said first video frame to obtain said structural information;
17 receive said kinetic information; and
18 reconstruct said second video frame by combining said kinetic information
19 with said structural information.

1 5. An encoder comprising:
2 (a) a first module configured to receive a first video frame;
3 (b) a second module configured to encode said first video frame;
4 (c) a third module configured to decode said first video frame;
5 (d) a fourth module configured to determine the structural characteristics
6 of said first video frame;
7 (e) a fifth module configured to order said structural characteristics of said
8 first video frame;
9 (f) a sixth module configured to obtain a second video frame;
10 (g) a seventh module configured to code a difference between said
11 structural characteristics of said first video frame and the structural characteristics of said
12 second video frame; and
13 (h) an eighth module configured to transmit said difference.

1 6. A decoder comprising:
2 (a) a first module configured to receive a first video frame;
3 (b) a second module configured to decode said first video frame;
4 (c) a third module configured to determine the structural characteristics of
5 said first video frame;

6 (d) a fourth module configured to order said structural characteristics of
7 said first video frame;
8 (e) a fifth module for receiving a difference between said structural
9 characteristics of said first video frame and the structural characteristics of a second video
10 frame; and
11 (f) a module for decoding the difference.

1 7. An apparatus for synchronized encoding and decoding of video
2 information comprising:

3 (a) an encoder configured to obtain a first video frame, encode said first
4 video frame, decode said first video frame, and obtain structural information for said first
5 video frame; and

6 (b) a decoder configured to obtain said first video frame, decode said first
7 video frame, and obtain structural information for said first video frame.

1 8. A signal embodied in a carrier wave comprising kinetic information
2 describing a second video frame in terms of the structural information of a first video
3 frame.

1 9. A signal embodied in a carrier wave comprising coefficients derived
2 from a set of basis functions describing a second video frame in terms of the structural
3 information of a first video frame.